

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

IN RE: Patent Application of:

5	BRITT	Attorney Docket No.: COE-564
	Serial No.: 10/729,269	Group Art Unit: 3627
	Filed: 12/08/2003	Examiner: C. BUCHANAN

FOR: AUTOMATED RESOURCE MANAGEMENT SYSTEM (ARMSTTM)

10

AMENDED APPEAL BRIEF UNDER 37 CFR §§ 1.192 AND 41.37

As applicable to the Notice of Appeal filed June 10, 2009 and Notification of Non-
15 Compliant Appeal Brief of 09/14/2009.

TABLE OF CONTENTS

	References Cited in the Appeal Brief	3
	Real Party in Interest	7
5	Related Appeals and Interferences	7
	Status of Claims	7
	Status of Amendments	7
	Summary of Claimed Subject Matter	7
	Issues	9
10	Argument	9
	I. Are claims 1-18 Obvious Under 35 U.S.C § 103(a) as being Unpatentable Over <i>Alexander et al.</i> (US 6,574,561) in View of <i>Curkendall</i> (US 6,345,885)?	9
	Summary	35
15	Appendix A: Copy of Claims Involved in the Appeal	36
	Appendix B: Evidence	43
	Appendix C: Related Appeals and Interferences	44

REFERENCES CITED IN THE APPEAL BRIEF

U.S. Patent No. 6,574,561 B2 to *Alexander et al.*, June 3, 2003.

U.S. Patent No. 6,346,885 B1 to *Curkendall*, issued Feb. 2, 2002.

5 *Reiner v. I. Leon Co.*, 285 F.2d 501, 503-504, 128 USPQ 25, 27 (2d Cir. 1960)

(*Reiner*)

Cuno Engineering Corp. v. Automotive Services Corp., 314 US 84, 87, 51 USPQ
272, 275 (1941)

Hotchkiss v. Greenwood, 52 US (11 How.) 248 (1850)

10 *Graham v. John Deere Co.*, 383 US 1, 148 USPQ 459 (1966) (*Graham*)

Calmar & Colgate-Palmolive Co. v. Cook Chemical Co., *ibid*

United States v. Adams, 383 US 39, 148 USPQ 479 (1966) (*Adams*)

KSR International Co. v. Teleflex Inc., 550 U.S. 398, 127 S.Ct. 1727, 82 USPQ2d
1385 (2007) (*KSR*)

15 *Panduit Corp. v. Dennison Mfg. Co. (Panduit II)*, 810 F. 2d 1561, 1575, 1 USPQ
2d 1593, 1605 (Fed. Cir. 1987)

Medtronic, Inc. v. Cardiac Pacemakers, Inc., 721 F. 2d 1563, 720 USPQ 97 (Fed.
Cir. 1983)

Fromson v. Advance Offset Plate, Inc., 720 F. 1565, 219 USPQ 1137 (Fed. Cir.
20 1983)

Stratoflex, Inc. v. Aeroquip Corp., 713 F. 2d 1530, 218 USPQ 871 (Fed. Cir. 1983)

Environmental Designs Ltd. v. Union Oil, 713 F. 2d 693, 218 USPQ 865 (Fed. Cir. 1983)

Kimberly-Clark Corp. v. Johnson & Johnson, 745 F. 2d 1437, 1448, 223 USPQ 603, 609-610 (Fed. Cir. 1984)

Fromson v. Advance Offset Plate, Inc.(Fromson II) at 755 F.2d 1549, 1556, 225 USPQ 26, 31 (Fed. Cir. 1985)

Anderson's-Black Rock, Inc. v. Pavement Salvage Co., 396 US 57, 163 USPQ 673 (1969)

Lincoln Engineering Co. v. Stewart-Warner Corp., 303 U.S. 545

A&P Tea Co. v. Supermarket Corp., 340 U.S. 147

B.G. Corp. v. Walter Kidde & Co., 79 F.2d 20, 26 USPQ 288 (2d Cir. 1935)

In re Piasecki, 745 F.2d 1468, 223 USPQ 785 (Fed. Cir. 1984)

Simmons Fastener Corp. v. Illinois Tool Works, 739 F.2d 1573, 222 USPQ 744 (Fed. Cir. 1984)

In re Sernaker, 702 F.2d 989, 217 USPQ 1 (Fed. Cir. 1983)

In re Kahn, 441 F.3d 977, 78 USPQ2d 1329 (Fed. Cir. 2006)

In re Oetiker, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992).

In re Eli Lilly & Co., 902 F.2d 943, 14 USPQ2d 1741 (Fed. Cir. 1990)

In re Garrett, 33 BNA PTCJ 43 (November 13, 1986)

In re Antonie, 559 F.2d 618, 195 USPQ 6 (CCPA 1977)

Application of Bergel, 292 F.2d 955 (1961)

Ex parte Levengood, 28 USPQ2d 1300 (Bd. Pat. App. & Inter. 1993)

In re Mills, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990)

5 *In re Fritch*, 972 F.2d 1260, 23 USPQ2d 1780 (Fed. Cir. 1992)

In re Gordon, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984)

In re Kotzab, 217 F.3d 1365, 55 USPQ2d 1313 (Fed. Cir. 2000)

Lyon v. Bosch & Lomb Optical Co., 224 F.2d 530, 106 USPQ 1, (2d Cir. 1955)

In re Dembiczak, 175 F.3d 994 (Fed. Cir. 1999)

10 *In re Gartside*, 203 F.3d 1305 (Fed. Cir. 2000)

In re Rouffett, 149 F. 3d at 1355

Vas-Cath, Inc. v. Mahrkar, 935 F. 2d 1555, 19 USPQ 2d 111 (Fed. Cir. 1991)

Perkin-Elmer Corp. v. Computervision Corp., 732 F. 2d 888, 221 USPQ 669 (Fed. Cir. 1984)

15 *Jones v. Hardy*, 727 F. 2d 1524, 229 USPQ 1021 (Fed. Cir. 1984)

In re Fine, 837 F. 2d 1071, 5 USPQ 2d 1596 (Fed. Cir. 1988)

In re Evanega, 829 F. 2d 1110, 4 USPQ 2d 1249 (Fed. Cir. 1987)

In re Chupp, 816 F. 2d 643, 2 USPQ 2d 1437 (Fed. Cir. 1987)

Carl Schenck, A.G. v. Nortron Corp., 713 F. 2d 782, 218 USPQ 698 (Fed. Cir. 1983)

20

Attorney Docket No.
COE-564

APPEAL BRIEF
Serial No. 10/729,269

Monroe Auto Equipment Co. v. Heckethorn Mfg. & Supply Co., 332 F. 2d 406, 412

(CA6 1964)

MPEP §§ 706.07, 2142, 2143.01

REAL PARTY IN INTEREST

The Real Party in Interest in this patent application is the United States Government as represented by the Secretary of the Army. Enclosed in the documents filed with the application is a copy of the assignment abstract from the
5 named inventor, John T. Britt, assigning all rights in the invention to the United States Government.

RELATED APPEALS AND INTERFERENCES

None. See Appendix C.

STATUS OF CLAIMS

10 Claims numbered 1 – 18 were presented with the original application, filed December 8, 2003. All claims (1 – 18) are rejected. All rejected claims (1 – 18) are appealed.

STATUS OF AMENDMENTS

No amendments have been filed by Appellant after final rejection, and no examiner's
15 amendments have been entered.

SUMMARY OF CLAIMED SUBJECT MATTER

Please refer to the application Serial No. 10/729,269 filed December 8, 2003 at page 2, line 6 through page 4, line 25. The information contained in the referenced lines summarizes the claimed invention. A concise explanation of the
20 claimed invention follows.

The Automated Resource Management System (ARMS™) automates collection, integration, analysis, reporting and archiving of data in a variety of applications while insuring data accuracy and reliability not attainable conventionally. (p. 2, lines 6-8). ARMS™ integrates a number of portable devices
5 through specially developed interfaces, employing digital technology and specialized software in these portable devices as well as in analysis devices, such as PCs. ARMS™ is used for post-processing as well as real-time reporting, analysis, and direction to a project. (p. 2, lines 12-14, 22-24 and 26-28; p. 3, lines 21-22)

ARMS™ applications range from simple routine measurements such as
10 ongoing monitoring to complex scientific investigations. (p.2, lines 17-18) ARMS™ facilitates feedback for improving data collection, analysis, reporting, and archiving. (p.2, lines 26-28) A typical ARMS™ system includes: a client/server application of portable computers for manually recording and integrating data from a variety of sources; a PC functioning as the server to post-process data and to run other
15 applications, high-resolution instrumentation, differential (GPS), laser range finders, inclinometers, altimeters, thermometers, barometers, compasses, code labelers/inserters such as barcode labelers, radars, LADARs, sonar devices, spectrometers, and clocks; interfaces to handle data, store it to a database and synthesize it; an embedded GIS; communications devices that transmit and store data
20 for remote connection to the server; and devices to bar-code labels. (p. 2, line 29 – p.

3, line 27)

ARMS™ allows a user to select and pre-load software applications and configure hardware tailored for a specific type and level of investigation. (p.4, lines 4-8).

5 Independent Claim 1 describes a system for managing sample collection at remote locations, comprising: a client-server 103 including a portable device such as a PDA and a computer 102; portable instrumentation 101; a GIS 207; a communications device 403, 210; hardware and software interfaces 110, 207 between instrumentation devices 101, GIS 207, the portable devices and a
10 communications device 403, 210; and a labeler 101, 204. (p.2, line 29- p.3, line 27).

Independent Claim 8 describes a method for managing sample collection at remote locations, comprising: establishing requirements, selecting 201 hardware and software to meet the requirements, procuring the hardware and software, and
15 integrating 207 the hardware and software. (p. 4, lines 4-12, p. 5, lines 18-20, p. 6, lines 20-22, p. 7, lines 2-5 and 13-15, p.8, line 3.)

ISSUES

1. Are Claims 1 - 18 obvious under 35 U.S.C § 103(a) as being unpatentable over *Alexander et al.* (US 6,574,561) in view of *Curkendall* (US 6,346,885)?

ARGUMENT

I. ISSUE 1: Are Claims 1 - 18 obvious under 35 U.S.C § 103(a) as being unpatentable over *Alexander et al.* (US 6,574,561) in view of *Curkendall* (US 6,346,885)?

5 A. Appellant respectfully notes that Examiner has not complied with the requirements of MPEP § 706.07 in identifying this Office Action as a Final Office Action, specifically:

10 *Before final rejection is in order a clear issue should be developed between the examiner and Applicant.... present practice does not sanction hasty and ill-considered final rejections.* The Applicant ... should receive the cooperation of the examiner to that end, and not be prematurely cut off where a single previous Office Action contains a complete statement of a ground of rejection, the final rejection *may* refer to
15 such a statement and also *should* include a *rebuttal* of any arguments raised in the applicant's reply....(emphasis added).

Examiner should have included in his response in the 2nd (final) Office Action arguments containing evidence, not merely examiner opinion.

20 Consider that the reference (*Alexander et al.* in view of *Curkendall*) and argument in the Final Office Action is the same as in the first Office Action in not making the *prima facie* case, Further, Examiner did not respond specifically to each of Appellant's positions maintained in the response to the 1st Office Action, even considering that Appellant had no duty to respond to an Office Action that
25 did not make the *prima facie* case. As an example, Examiner failed to specifically

address how knowing the *single* function of the *Alexander et al.* patent would make the *multiple* functions performed by Appellant's invention obvious. Therefore, Appellant respectfully appeals the classification of the 2nd Office Action as Final and requests that the Examiner re-classify the "Final" (second) Office
5 Action as a non-final Office Action.

B. Examiner did not make a *prima facie* case of obviousness under §103 in either the 1st or 2nd (final) Office Action. The Examiner must establish the necessary *prima facie* case for a §103 rejection, if at all possible.

Alexander et al. is not suited to management of sample collection but rather
10 photographs, anecdotal comments and check boxes, all describing only "condition" at a verified location (via GPS) and time. From the Abstract:

15 A system for automating the gathering of field information that describes the *condition* of specific *geographical locations* at specific times via *a* field information *recording device* having a GPS receiver for the recording and assignment of the space-time coordinates as information is gathered.... the field information is integrated into *a* geographic database such that the information generates a template showing the current state or *condition* of the identified geographical location... (emphasis added).

20 Compare *Alexander et al.* Abstract to Appellant's Abstract:

25 The Automated Resource Management System (ARMS™) automates collection, *integration, analysis*, reporting and archiving of data in a *variety of applications* ... ARMS™ integrates *a number* of portable devices...as well as analysis devices, such as PCs and servers. ...It is useful for both *post-processing* and *real-time* reporting, analysis, and *pro-active direction* of ongoing investigations. (emphasis added).

One of the *functions* of Appellant's invention is to manage the taking of samples from different sources (physical, measurements of size, IR photos, orientation, and the like) while the sole function of the *Alexander et al.* device is to automate the gathering of field information that describes the *condition* of specific
5 *geographical locations* at specific *times*. The *Alexander et al.* device generates a template showing the *current* state or condition of a *geographical location*. Appellant's invention *automates* collection, *integration*, *analysis*, reporting and archiving of data in a *variety* of applications when it *integrates* the output and facilitates interaction among a *number* of portable devices. There is no discussion
10 in *Alexander et al.* of each separate *function* of the various elements of Appellant's invention in providing the *function(s)* necessary to handle actual *samples*, either tangible (solid, liquid, gas) or intangible (e.g., physical dimensions, measurements). (Claim 1; FIG. 3; p. 6, line 29 - p. 7, line 27).

The *Alexander et al.* invention has a sole purpose of "damage assessment"
15 and concomitant geographic location of the damage to communicate to an "Emergency Management Center." (Col. 7, lines 10-11; Col. 11, lines 53-57). These are not "design considerations" possibly employable in "adapting" the *Alexander et al.* apparatus as stated by Examiner. Appellant's invention requires an entirely different unique and unobvious engineering solution to address stringent
20 requirements which can not be met by a variation of the *Alexander et al.* device

even in view of the addition of the RFID reader of *Curkendall*. Appellant respectfully notes the comments of Judge Learned Hand in *Reiner v. I. Leon Co.*, 285 F.2d 501, 503-504, 128 USPQ 25, 27 (2d Cir. 1960) (*Reiner*):

5 It is idle to say that combinations of old elements cannot be inventions; *substantially every invention is for such a "combination;"* that is to say, it consists of former elements in a new assemblage. All the constituents may be old, if their new concourse would not "have been obvious *at the time the invention was made* to a person having *ordinary* skill in the art." (emphasis added).

10 35 U.S.C § 103 was written to provide an *objective measure* for ascertaining whether an invention is non-obvious, specifically addressing the inadequacy of such *subjective measures* as "flash of genius" espoused in *Cuno Engineering Corp. v. Automotive Services Corp.*, 314 US 84, 87, 51 USPQ 272, 275 (1941) (*Cuno*).

15 The purpose of §103 is to substitute "nonobviousness" for the subjective "standard or level of invention" that came about by judicial construction in parallel with the *judicially* created nonobviousness standard of *Hotchkiss*. *Hotchkiss v. Greenwood*, 52 US (11 How.) 248 (1850).

20 Courts using an inherently *subjective* "level of invention" rather than a desirable *objective* concept of nonobviousness was sufficient motivation for Congress to pass the Patent Act of 1952 that included §103. Any return to a way of defining nonobviousness *subjectively* rejects the reason for codifying §103.

 A trio of cases was decided by the Supreme Court in 1966, a sufficient time after codification of §103 to attain some judicial history in interpreting §103. The

"standard of invention" of *A&P Tea Co. v. Supermarket Corp.*, 340 U.S. 147, at 153 (*A&P Tea*) was ignored in: *Graham v. John Deere Co.*, 383 US 1, 148 USPQ 459 (1966) (*Graham*); *Calmar & Colgate-Palmolive Co. v. Cook Chemical Co.*, *ibid*, and *United States v. Adams*, 383 US 39, 148 USPQ 479 (1966) (*Adams*). The
5 recent case of *KSR International Co. v. Teleflex Inc.*, 550 U.S. 398, 127 S.Ct. 1727, 82 USPQ2d 1385 (2007) (*KSR*) cited to *Graham* and *Adams* in reasserting that the "several basic fundamental inquiries" of *Graham*, as *re-stated* by many Examiners in Office Actions citing §103, are required. These include: the scope and content of prior art; differences between prior art and claims at issue; the level of skill in the
10 pertinent art; and, often overlooked, *objective* indicia such as commercial success, long felt but unsolved needs, failure of others, and the like to "illustrate" the *circumstances surrounding the origin of the subject matter sought to be patented*.

All §101-patentable inventions are novel and useful *combinations* of known elements. Further, there is only *one* §103 standard of nonobviousness for all types
15 of inventions. *Panduit Corp. v. Dennison Mfg. Co. (Panduit II)*, 810 F. 2d 1561, 1575, 1 USPQ 2d 1593, 1605 (Fed. Cir. 1987); *Medtronic, Inc. v. Cardiac Pacemakers, Inc.*, 721 F. 2d 1563, 720 USPQ 97 (Fed. Cir. 1983); *Fromson v. Advance Offset Plate, Inc.*, 720 F. 1565, 219 USPQ 1137 (Fed. Cir. 1983); *Stratoflex, Inc. v. Aeroquip Corp.*, 713 F. 2d 1530, 218 USPQ 871 (Fed. Cir.
20 1983); *Environmental Designs Ltd. v. Union Oil*, 713 F. 2d 693, 218 USPQ 865

(Fed. Cir. 1983). "It is immaterial to the issue, however, that all of the elements were old in other contexts. What must be found obvious to defeat the patent is the *claimed combination*." *Kimberly-Clark Corp. v. Johnson & Johnson*, 745 F. 2d 1437, 1448, 223 USPQ 603, 609-610 (Fed. Cir. 1984). (emphasis added). Chief Judge Markey in *Fromson v. Advance Offset Plate, Inc.*(*Fromson II*) at 755 F.2d 1549, 1556, 225 USPQ 26, 31 (Fed. Cir. 1985) chided the trial court for stating that the patent in suit is a "combination patent comprised exclusively of old elements." He observed that "Only God works from nothing. Men must work with old elements." *Id.*

The *Adams* case further expounds on the "guidelines" useful for determining nonobviousness of the invention *as a whole*. The structure claimed in *Adams* was as similar physically and chemically to the prior art as was possible without direct anticipation. The *Adams* battery used electrodes of cuprous chloride and magnesium, a combination of electrodes never before seen in a *single* battery. The prior art *taught* that cuprous chloride electrodes were *equivalent* to silver chloride electrodes and that magnesium electrodes were the *equivalent* of zinc electrodes, both zinc and silver chloride taught in prior art as electrode material.

The Government argued that the structural similarities made the invention obvious and that *only* the physical or structural differences between the invention and prior art may be investigated as a *basis* for determining nonobviousness. This

was rejected by the *Adams* court just as using *only* a strict TSM test was rejected by the *KSR* (2007) court over 40 years later. Specifically, the *Adams* court stated:

5 If the use of magnesium for zinc and cuprous chloride for silver chloride were *merely* equivalent substitutions, it would follow that the resulting device – Adams' – *would have equivalent operating characteristics*. But it does not. (emphasis added).

Further, other factors were mentioned by the *Adams* court, including the commercial success of the *Adams* battery and its particular usefulness to the military and for scientific research heretofore prohibited for lack of this type of power source. The holding in *Adams* properly addresses the fact that courts and, hopefully, Examiners, must consider *all* the evidence before concluding an obviousness analysis, including the circumstances surrounding the making of the invention at the time of the invention.

15 Three years after the above trio of landmark cases, the Supreme Court in *Anderson's-Black Rock, Inc. v. Pavement Salvage Co.*, 396 US 57, 163 USPQ 673 (1969) while invalidating the patent at issue, stated:

20 Each of the elements combined in the patent was known in the prior art... The combination of putting the burner together with the other elements in one machine, though perhaps a matter of great convenience, *did not produce a "new or different function,"* *Lincoln Engineering Co. v. Stewart-Warner Corp.*, 303 U.S. 545, 549, within the test of validity of combination patents... (emphasis added).

25 Without agreeing with the rationale involved in elucidating this additional "judicially created" restriction in an obviousness analysis, it is apparent that

Appellant's invention provides a different function, i.e., integration of various *instrumentation*, GPS, recorders, communication devices and processors (computers) and bar code readers/generators to automate sample and information collection and remove or reduce the number of manual steps required. (Claim 1; FIG. 3; p. 6, line 29 - p. 7, line 27). In contrast, the *Alexander et al.* invention has a sole purpose of "damage assessment" and concomitant geographic location of the damage to communicate to an "Emergency Management Center." (Col. 7, lines 10-11; Col. 11, lines 53-57).

This, of course, assumes that the problem itself would have been obvious to one of ordinary skill in the art at the time the invention was made in order for the second part of the test to be applicable. The problem addressed by Appellant is providing the *function(s)* necessary to automate the handling of actual *samples*, either tangible or intangible. This is a problem not previously addressed.

Every invention is a combination of "old elements" since no inventor "creates" anything used in the invention, thus the holding in *Anderson's-Black Rock* applies to *all* inventions and the real danger is in applying that one provision *a la carte* without considering *all* evidence pertaining to the development of the invention *as a whole*, including the circumstances surrounding the development at the time of the invention. The *inspiration* to "*select and combine*" is the creative act as recognized by Judge Learned Hand in *B.G. Corp. v. Walter Kidde & Co.*, 79

F.2d 20, 22, 26 USPQ 288 (2d Cir. 1935), 17 years before Congress codified §103:

5 All machines are made up of the same elements; rods, pawls, pitmans, journals, toggles, gears, cams and the like, all acting their parts as they always do and always must... But the elements are capable of an infinity of permutations and the selection of that group which *proves serviceable to a given need* may require a high degree of originality. *It is that act of selection which is the invention...* (emphasis added).

10 As stated above, the best "hard" evidence of nonobviousness is from the *objective* secondary considerations and any "test" that overlooks the importance of the inclusion of this evidence is *incomplete* when examining the invention *as a whole* as required by the language of §103. Not addressing the *objective* secondary considerations will lead to a return to the *subjective* judgments that led to the passage of §103 *and* deny the Appellant due process of law. *All* evidence must be
15 considered before a nonobviousness judgment is made, by either the PTO or the courts. *In re Piasecki*, 745 F.2d 1468, 223 USPQ 785 (Fed. Cir. 1984); *Simmons Fastener Corp. v. Illinois Tool Works*, 739 F.2d 1573, 222 USPQ 744 (Fed. Cir. 1984); *In re Sernaker*, 702 F.2d 989, 217 USPQ 1 (Fed. Cir. 1983).

20 In 2007, based on the need to address the confusion existing in the Federal Circuit in "correlating" diverse holdings *KSR* attempts to clarify the necessary steps for an obviousness investigation and one of the results is that *Graham*, *Adams*, *A&P Tea*, and *Sakraida* (*Sakraida v. Agpro, Inc.*, 425 US 273, 189 USPQ 449 (1976)) are again cited as "good law" but the "approach" of *Graham* is re-emphasized as the correct approach, now laced with *flexibility* to apply sound logic

("common sense") to the task of evaluating the invention *as a whole*. This analysis of the invention *as a whole* includes consideration of the maligned "TSM test" as apparently applied "too strictly" in *KSR*. The difficulty in attaining concrete guidance from *KSR* is that none of the prior conflicting holdings of the Supreme Court were overturned, thus, the non-committal "flexibility" standard was espoused to provide a rationale that also acknowledges the principle of *stare decisis*. *Flexibility*, however, without some *discipline*, invites *subjectivity* back into the mix. *Graham* provides the discipline. Justice Clark in *Graham* noted that: relative evidence for analysis of nonobviousness includes objective indicia such as:

(1) long felt, unsatisfied need *while the needed implementing arts and elements had long been available*; and (2) recognition that a problem existed and what it was went unseen by those of ordinary skill in the art at the time the invention was made,

MPEP §2142 states:

To reach a proper determination under 35 U.S.C § 103 the examiner must step backward in time ...when the invention was unknown and just *before it was made*. ... the examiner must then make a determination whether the claimed invention "as a whole" would have been obvious ... Knowledge of Applicant's disclosure must be put aside ..., yet kept in mind in order to determine the "differences," conduct the search and evaluate the "subject matter *as a whole*" impermissible hindsight must be avoided and the legal conclusion must be reached on the *basis of the facts* gleaned ... (emphasis added).

The Examiner has not complied with the above principles. Further, the

existence of elements of Appellant's invention, each in separate patents (*Alexander et al.* and *Curkendall*) unrelated to a solution of the *problem* addressed by the Appellant, without some further *motivation* or *suggestion* for tying the multiple elements together is a *strong* indicator that the invention was not evaluated *as a whole* as required to comply both with case law and the MPEP. MPEP 2142 further elaborates on *how* to establish a *prima facie* case of obviousness. "Mere conclusory statements" without the "rationale underpinning" required by *KSR* means that the required *prima facie* case has not been made.

The key to supporting any rejection under 35 U.S.C. 103 is the *clear articulation of the reason(s) why* the claimed invention would have been obvious. The Supreme Court in *KSR International Co. v. Teleflex Inc.*, 550 U.S. ___, ___, 82 USPQ2d 1385, 1396 (2007) noted that the analysis supporting a rejection under 35 U.S.C. 103 should be made *explicit*. The Federal Circuit has stated that "rejections on obviousness *cannot* be sustained with *mere conclusory* statements; instead, there must be some *articulated reasoning* with *some rational underpinning* to support the legal conclusion of obviousness." *In re Kahn*, 441 F.3d 977, 988, 78 USPQ2d 1329, 1336 (Fed. Cir. 2006). See also *KSR*, 550 U.S. at ___, 82 USPQ2d at 1396 (quoting Federal Circuit statement with approval). (emphasis added).

If the examiner determines there *is* factual support for rejecting the claimed invention under 35 U.S.C. § 103, the examiner *must then* consider any evidence supporting the patentability of the claimed invention, such as any evidence *in the specification* or any *other* evidence submitted by the Appellant. The ultimate determination of patentability is based on the *entire record*, by a preponderance of evidence, with due consideration to the persuasiveness of any arguments and *any secondary evidence*. *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992)... (emphasis added).

When an Applicant submits evidence, whether in the *specification as originally filed* or in reply to a rejection, the examiner *must* reconsider

the patentability of the claimed invention. The decision on patentability must be made based upon consideration of *all* the evidence, including the *evidence* submitted by the examiner *and* the evidence submitted by the Applicant. ... *Facts* established by rebuttal evidence must be evaluated *along with* the *facts* on which the conclusion of obviousness was reached, *not against* the conclusion *itself*. *In re Eli Lilly & Co.*, 902 F.2d 943, 14 USPQ2d 1741 (Fed. Cir. 1990). (emphasis added). See *In re Piasecki*, 745 F.2d 1468, 223 USPQ 785 (Fed. Cir. 1984) for a discussion of the proper roles of the examiner's *prima facie* case and Applicant's rebuttal evidence ..,

Just as the Appellant must provide support, i.e., evidence, for positions taken both in addressing the examiner's *requirement* to proffer a *prima facie* case as well as the rebuttal of a sufficient *prima facie* case, the examiner must support any rejection under § 103 with *evidence*. *In re Garrett*, 33 BNA PTCJ 43 (November 13, 1986). For example, an inventor discovered the optimum ratio for tank volume to contactor area for a waste water invention using continuously rotating contactors within the tank. The examiner cited one reference employing the contactors for waste water treatment and indicated the ratio was an obvious modification even though the cited reference made *no* mention of the ratio or need for its calculation, just as none of the cited references (*Alexander et al.*, *Curkendall*) make a reference of the need to automate the process of collecting samples thereby eliminating or reducing error-prone manual entry and manual data manipulation. The court held the invention non-obvious, stating:

It is impossible to recognize, from the experiment taught [by the reference], that the "treatment capacity" is a function of "tank volume"

or the tank volume-to-contactor ratio. Recognition of this *functionality* is essential to the obviousness of conducting experiments to determine the value of the "tank volume" ratio which will maximize treatment capacity. (emphasis added).

5 *In re Antonie*, 559 F.2d 618, 620, 195 USPQ 6, 8 (CCPA 1977).

Appellant respectfully notes that if Appellant's invention were the same as the cited references, in particular *Alexander et al.*, then one would expect the same results from employing it and the *Alexander et al.* invention is specifically limited to a sole purpose of "damage assessment" and concomitant geographic location of
10 the damage to communicate to an "Emergency Management Center." (Col. 7, lines 10-11; Col. 11, lines 53-57). Further, as also discussed below, combining *Curkendall* with *Alexander et al.* would still not yield the performance of Appellant's invention because the basic underlying assumptions employed by the Appellant are not available for reference in any combination of the cited
15 references. There must be a *basis in the Art* for combining or modifying references. MPEP § 2143.01 states:

Obviousness can be established by combining or modifying the teachings of the prior art ... where there is some teaching, suggestion, or motivation to do so. *In re Kahn*, 441 F.3d 977, 986, 78 USPQ2d 1329, 1335 (Fed. Cir. 2006) (discussing rationale underlying the motivation-suggestion-teaching test as a guard *against using hindsight* in an obviousness analysis). ... (emphasis added).
20

Appellant notes that nowhere in *Alexander et al.*, *Curkendall* or *Alexander*

et in view of Curkendall is there reference to automating the process of taking samples, providing hardware and software interfaces to various different instrumentation, providing barcode stamps and readers for tracking the samples and tying the date, time, location and other positioning and orientation information to a specific sample. (FIGS. 2-4; p. 8, line 12 - p. 9, line 2). This missing information provides *evidence* in Appellant's application of the differences between *Alexander et al.* in view of *Curkendall* and Appellant's invention. Appellant further notes that *Alexander et al.* works only to advise an EMC of "status" and damage at specific locations while being employed in other limited conditions. (Col. 11, lines 13-28; Col. 12, lines 1-24; Col. 16, lines 17-25 Abstract; FIG. 3). This is not relevant to the problem first identified by the Appellant, i.e., an automated system for managing the collection of samples that is capable of deployment with a single individual scientist or technician. Since *Alexander et al.* merely provides for damage assessment and reporting, Appellant's problem is not addressed by considering *Alexander et al.* Nor is Appellant's problem addressed in the livestock "tracker" of *Curkendall*. There would be *no* correlation in the mind of one of ordinary skill in the art at the time the invention was made to use the damage assessment system of *Alexander et al.* to develop the automated system for managing the collection of samples of Appellant's invention, given the requirements that need to be met: interfacing multiple instruments, man

portable, labeling samples, recording inventory data, correlating time, space, position information, recording orientation, and the like. Appellant's invention provides a unique configuration for automating the management of sample collection, analysis, archiving and subsequent processing. (FIGS. 2-4; p. 8, line 12
5 - p. 9, line 24). Compare to the use of the *Alexander et al.* device for "damage assessment and reporting" and the *Curkendall* device for managing livestock. The *Alexander et al.* device is totally unsuited to the requirements that dictated the development of Appellant's invention and does not "make obvious" Appellant's invention either alone or in combination with *Curkendall*.

10 In discussing *Sakraida* and *Anderson's Black Rock*, Justice Kennedy stated:

Following these principles may be *more difficult in other cases than it is here* because the claimed subject matter may involve more than the *simple substitution* of one known element for another ... Often, it will be necessary for a court to look to interrelated teachings
15 of multiple patents; the effects of demands known to the design community or present in the marketplace; *and* the background knowledge possessed by a person having *ordinary* skill in the art, *all* in order to determine whether there was an *apparent reason* to combine the known elements... (emphasis added).

20 What may be taken from Justice Kennedy's discourse in *KSR* immediately above, is that an *apparent* reason to combine must be stated *given that* following the principles of *Sakraida* and *Anderson's Black Rock* in determining a "required" threshold of "invention" may not be straightforward in those situations where
25 *simple substitution* of one known element for another is *not* the case as with

Appellant's invention. Interrelated teachings of the two patents (*Alexander et al.* and *Curkendall*) cited by the Examiner provide no insight into an *apparent reason* for combining them in the manner the Appellant has, i.e., there is no reference to a unique configuration for automating the management of sample taking from various instrumentation using a system that is man-packable in the field. Further, there were no *demands in the design community* since the use of manual methods and entry means (forms, keyboards, and the like) were adequate to manage collection of samples, albeit these were error prone, expensive and slow. (p. 1, lines 20-31). Without an *identified* problem, how could one of ordinary skill in the art *at the time the invention was made* have been motivated to solve it?

Justice Kennedy further states in *KSR*:

When it first established the *requirement of demonstrating a teaching, suggestion, or motivation to combine* known elements in order to show that the combination is obvious, the Court of Customs and Patent Appeals, captured a helpful insight. See *Application of Bergel*, 292 F.2d 955, 956-957 (1961). As is clear from cases such as *Adams*, a patent composed of several elements is not proved obvious *merely by demonstrating that each of its elements was, independently, known in the prior art*. Although common sense directs one to look with care at a patent application that claims as *innovation* the combination of *two* known devices *according to their established functions*, it can be important to *identify a reason* that would have prompted a person of *ordinary* skill in the relevant field *to combine* the elements in the *way* the claimed new invention does. (emphasis added).

Recognition of the *existence* of a problem must be made before *any* consideration may be made of the "likelihood" of it being obvious. Thus, a

threshold of "problem recognition" must be addressed *before* investigation of the *motivation* of the mythical person of *ordinary* skill in the art *at the time the invention was made*. However, neither was addressed in Examiner's investigation.

MPEP § 2143.01 further states:

5 A statement that modifications of the prior art to meet the claimed invention would have been "well within the ordinary skill of the art at the time the claimed invention was made" because the references relied upon teach that all aspects of the claimed invention were *individually* known in the art is *not* sufficient to establish a *prima facie* case of
10 obviousness without some *objective* reason to combine the teachings of the references. *Ex parte Levengood*, 28 USPQ2d 1300 (Bd. Pat. App. & Inter. 1993). [R]ejections on obviousness cannot be sustained by *mere conclusory* statements; instead, there *must* be some *articulated reasoning* with some *rational underpinning* to support the legal
15 conclusion of obviousness." *KSR*, 550 U.S. at ___, 82 USPQ2d at 1396 quoting *In re Kahn*, 441 F.3d 977, 988, 78 USPQ2d 1329, 1336 (Fed. Cir. 2006). (emphasis added).

Examiner cited references that at most *individually* contained only one or two of the elements of Appellant's invention, providing no *apparent* reason via
20 "articulated reasoning with some rational underpinning" to combine the teachings of the cited references. Thus, the Examiner did not establish a *prima facie* case. The mere fact that references *can be* combined or modified does not render the resultant combination obvious unless the prior art *also suggests the desirability* of the combination. (emphasis added). *In re Mills*, 916 F.2d 680, 16 USPQ2d 1430
25 (Fed. Cir. 1990).

Again, Appellant was not provided a *basis* "suggesting the desirability" of

combining the cited patents to achieve the solution obtained via Appellant's invention. This further assumes that Examiner can present *evidence* that one of ordinary skill in the art at the time the invention was made *should* have been able to *identify* the problem as the Appellant has.

5 Further, the court has stated that "the mere fact that the prior art *may* be modified in the manner suggested by the Examiner does not make the modification obvious *unless the prior art suggested the desirability of the modification.*" (emphasis added). *In re Fritch*, 972 F.2d 1260, 1266, 23 USPQ2d 1780, 1784 (Fed. Cir. 1992) (citing *In re Gordon*, 733 F.2d 900, 902, 221 USPQ 1125, 1127 (Fed. 10 Cir. 1984). The Examiner has not provided a single example in the prior art that suggests the *desirability* of the combination of Appellant's invention, but rather that there exist separate inventions, each possibly using one or only a few of the elements (albeit for an entirely different purpose in the case of both *Alexander et al.* and *Curkendall*) of Appellant's invention in a manner not ever *suggesting* to the 15 mythical one of *ordinary* skill in the art at the time the invention was made that there may be an advantage of combining that one element with any of the other elements of the cited references to achieve Appellant's purpose (function).

There is also no indication in any of the references that the function of automating sample collection would be possible using the referenced devices and 20 methods of *Alexander et al.* and *Curkendall*. Examiner has provided no

explanation of what specific understanding or technological principle within the knowledge of one of *ordinary* skill in the art *at the time of the invention* would have suggested Appellant's unique, non-obvious design approach, including the very specific way of interfacing various equipment to automate sample collection and post-processing, given that one of *ordinary* skill in the art *at the time the invention was made* would have even *recognized the specific problem* as Appellant has done. *See also, In re Kotzab*, 217 F.3d 1365, 55 USPQ2d 1313 (Fed. Cir. 2000).

Judge Learned Hand in upholding the patent in *Lyon v. Bosch & Lomb Optical Co.*, 224 F.2d 530, 535, 106 USPQ 1, 5 (2d Cir. 1955), said:

The most competent workers in the field had for at least ten years been seeking a hard, tenacious coating to prevent reflection;... *meanwhile nothing in the implementary arts had been lacking to put the advance into operation*; when it appeared, it supplanted the existing practice and occupied substantially the whole field. We do not see how any combination of evidence could more completely demonstrate that, simple as it was, the change had *not* been "obvious... to a person having *ordinary* skill in the art." (emphasis added).

Appellant respectfully maintains that each of the two cited systems (*Alexander et al.* and *Curkendall*) employed "implementary art" of computers, readers, recorders, GPS devices and the like, yet were unable to perform under the same conditions or to the same accommodations (automated sample management, for example) as Appellant's invention. Thus, either the problem addressed by the Appellant was not identified or if it had been identified earlier than Appellant's

identification then the solution was beyond the ken of one of *ordinary* skill in the art *at the time the invention was made*. Absent a showing to the contrary, the *problem* of what to do about the limited conditions under which the two referenced systems (*Alexander et al.* and *Curkendall*) can be used and the application to automating sample collection and post-processing had not been *identified* until the Appellant applied his *extraordinary* experience and *extraordinary* educational background to *both* identify and solve the problem.

Five years after *Lyon*, in *Reiner* at 503-504, Judge Learned Hand reversed a holding of obviousness, stating:

The test...directs *us* to surmise what was the range of ingenuity of a person "having *ordinary* skill" in the "art" with which we are totally unfamiliar; and we do not see how such a standard can be applied at all except by *recourse to the earlier work in the art and to the general history of the means available at the time*. To judge on our own that this, or that, new *assemblage* of old factors was, or was not, "obvious" is to substitute our ignorance for the acquaintance with the subject of those who were familiar with it. These are indeed some *signposts*: e.g., how long did the need exist; how many tried to find a way; *how long did the surrounding and accessory arts disclose the means*; how immediately was the invention recognized as an answer by those who used the new variant? (emphasis added).

From the above historical review, Appellant respectfully notes that even shortly after passage of the 1952 Patent Act the implications are clear that *many* factors, not all equal in the different scenarios (*surrounding circumstances*) arising at the specific time an invention is made, enter into a *complete* obviousness analysis. Appellant did not elucidate the differences only for the purpose of

validating claims but also for the purpose of indicating what Appellant's invention is capable of performing and what the cited references, alone or in any combination, are not capable of, thus establishing the patentable difference.

Judge Learned Hand's guidance is as good today (*Reiner* being "good law") as it was almost 50 years ago, providing an *objective* yardstick for measuring the nonobviousness of an invention. After all, the whole effort at establishing a nonobviousness "standard" is to eschew both *subjectivity*, and, as recently stated in *KSR*, *inflexibility* (in the *KSR* example, using *only* a "strictly" applied rule, i.e., TSM). All parties need to apply *objective* standards *flexibly* using common sense.

Justice Kennedy in *KSR* further elaborates on the one hand that:

Helpful insights, however, need not become rigid and mandatory formulas, and *when so applied* the TSM test is incompatible with our precedents. (emphasis added).

Note that the TSM test is *not* rejected outright but rather a caution to not apply it *rigidly* is given. Other than the *KSR* appeals court decision, no Supreme Court or Appeals Court "precedent" was reversed, meaning that *all* are appropriate for use in deciding what enters into a proper "obviousness analysis" and, in particular, the full *Graham* analysis is to be applied as specifically cited in *KSR*.

Further, Justice Kennedy noted that:

The obviousness analysis cannot be confined by a *formalistic* conception of the words teaching, suggestion, and motivation, *or* by *overemphasis on the importance of published articles* and the *explicit content of issued patents*. (emphasis added). ... There is *no* necessary

inconsistency between the idea underlying the TSM test and the Graham analysis. But when a court transforms the general principle into a *rigid rule* that *limits the obviousness inquiry*, as the Court of Appeals did here, it errs. (emphasis added).

5

Taken in the context of the *KSR* holding *as a whole*, neither the Examiner nor the Appellant is to "limit" their analysis to a "formalistic" application of a TSM test *or* by overemphasizing the importance of published articles and explicit content of patents. This statement does *more than* imply that all evidence must be
10 considered and a balancing achieved. It does *not* mean that it is inappropriate to consider the "lack of" motivation or a suggestion but rather that a suggestion or motivation, or lack thereof, is to be *one* of the factors in the analysis.

Further, Justice Kennedy in *KSR* turns a statement from Graham around by stating:

15

One of the ways in which a patent's subject matter can be proved obvious is by noting that there existed *at the time of invention* a *known problem* for which there was an *obvious* solution encompassed by the patent claims. (emphasis added).

20

KSR (2007).

25

Thus, it is a two-step approach, the first of which is a threshold step: the problem must have been *known* at the time of invention to one of *ordinary* skill in the art *at the time the invention was made*. Further, *if* the problem is *shown* to be known *at the time of invention* to other than the inventor, the solution proposed in
the claimed invention must have been "obvious" to one of *ordinary* skill in the art

at the time the invention was made. To show that the solution is obvious the three "principal" *Graham* factors must be considered objectively, preferably supplemented by *Graham's inherently objective* "secondary considerations" to complete a *full Graham* analysis. Can one do the analysis without considering *any* motivation, teaching or suggestion in the analysis? The answer is no because this could truncate the "flexible" application of "common sense" in a "broad inquiry."

Noted in *In re Kahn* is:

The ultimate determination of whether an invention would have been obvious is a legal conclusion *based on underlying findings of fact.* *In re Dembiczak*, 175 F.3d 994, 998 (Fed. Cir. 1999). (emphasis added). ... However, we review the Board's underlying factual findings, *including a finding of a motivation to combine, for substantial evidence.* *In re Gartside*, 203 F.3d 1305, 1316 (Fed. Cir. 2000). ... Rather, to establish a prima facie case of obviousness based on a combination of elements disclosed in the prior art, the Board *must articulate the basis* on which it concludes that it would have been obvious to make the claimed invention. *In re Rouffett*, 149 F. 3d at 1355. ... (emphasis added).

Further, the *Rouffett* Court said:

When the Board does not explain the *motivation*, or the *suggestion* or *teaching*, that would have led the skilled artisan *at the time of the invention* to the claimed combination *as a whole*, we infer that the Board *used hindsight to conclude that the invention was obvious.* *Id.* at 1358. (emphasis added).

To overcome an implication of hindsight, a motivation or suggestion must be found and documented via sufficient *evidence*.

Further, *all* elements of the claimed invention must be considered, not

merely the gist of the invention. *Vas-Cath, Inc. v. Mahrkar*, 935 F. 2d 1555, 19 USPQ 2d 111 (Fed. Cir. 1991); *Perkin-Elmer Corp. v. Computervision Corp.*, 732 F. 2d 888, 1575, 221 USPQ 669 (Fed. Cir. 1984); *Jones v. Hardy*, 727 F. 2d 1524, 1527-1528, 229 USPQ 1021, 1024 (Fed. Cir. 1984) ("Reducing a claimed
5 invention to an 'idea' and then determining patentability of the 'idea' is error."); *In re Fine*, 837 F. 2d 1071, 5 USPQ 2d 1596 (Fed. Cir. 1988); *In re Evanega*, 829 F. 2d 1110, 4 USPQ 2d 1249 (Fed. Cir. 1987). Thus, the specific interfaces required to implement Appellant's invention, for example, need be considered, not merely the comparison of *some* of the constituents of the invention with some of the
10 constituents present in existing patents. For example, the reporting method of the *Alexander et al.* device has a different purpose than Appellant's invention for that "element," and the RFID devices of *Curkendall* are unnecessarily expensive substitutes for bar code stickers of Appellant's invention.

Finally, advantages, properties, utility and unexpected results flowing from
15 an invention must be taken into account. They are part of the invention *as a whole* and the *circumstances surrounding the making of the invention*. *In re Chupp*, 816 F. 2d 643, 2 USPQ 2d 1437 (Fed. Cir. 1987); *Fromson v. Advance Offset Plate, Inc. (Fromson II)* at 755 F.2d 1549, 1556, 225 USPQ 26, 31 (Fed. Cir. 1985); *In re Piasecki*, 745 F.2d 1468, 223 USPQ 785 (Fed. Cir. 1984); *Carl Schenck, A.G. v.*
20 *Nortron Corp.*, 713 F. 2d 782, 218 USPQ 698 (Fed. Cir. 1983); *In re Sernaker*, 702

F. 2d 989, 217 USPQ 1 (Fed. Cir. 1983).

The *utility* of Appellant's invention allows for efficient (minimal manual data entry/manipulation), error-free (digitally interfaced instrumentation computer processor) and inexpensive (reduced manpower) with reduced time and increased accuracy in collecting and processing samples especially in abnormal environmental conditions. (p. 2, lines 12-28). These have not been considered in Examiner's obviousness analysis so that the invention has not been evaluated *as a whole*.

Appellant's system is not limited to specific scenarios as are the *Alexander et al.* (emergency management) and *Curkendall* (livestock management) devices and methods, either alone or in a combination as yet un-suggested by any argument proffered by Examiner, and is therefore patentably distinct. This illustrates the weakness of just taking elements from various patents *a la carte* without considering the invention *as a whole*, including a motivation or suggestion for combining elements.

As to the need for applying common sense to any obviousness analysis, Justice Kennedy in *KSR* had this to say:

The Court of Appeals, finally, drew the wrong conclusion from the risk of courts and patent examiners falling prey to hindsight bias. A *factfinder* should be aware, of course, of the *distortion* caused by hindsight bias and must be cautious of arguments reliant upon ex post reasoning. See *Graham*, 383 U.S. at 36 (warning against a "temptation to read into the prior art the teachings of the invention in issue" and

instructing courts to "guard against slipping into the use of hindsight" (quoting *Monroe Auto Equipment Co. v. Heckethorn Mfg. & Supply Co.*, 332 F. 2d 406, 412 (CA6 1964)). Rigid preventative (sic, preventive) rules that deny factfinders *recourse to common sense*, however, are neither necessary under our case law nor consistent with it. *Id.*, at 17. (emphasis added).

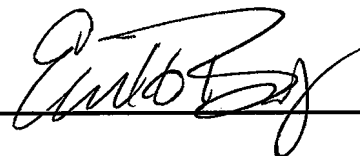
Alexander et al. discloses a system suitable for carrying out one function only, emergency management, while *Curkendall* is similar in its unitary function, disclosing a system for managing the location and status of livestock only.

Appellant provides a system, with sufficient flexibility inherent therein, to respond to multiple users' needs in widely varying applications. Specifically *Alexander et al.* is not suited to the purpose of management of sample collection.

SUMMARY

Accordingly, the Board of Patent Appeals and Interferences is respectfully requested to reverse the rejection of Claims 1 - 18.

Respectfully Submitted,

By: 

Albuquerque Engineer District
CESPA-OC (Rm. 303)
4101 Jefferson Pl. NE
Albuquerque, NM 87109-3435
505 342-3360

EARL H. BAUGHER, JR.
Attorney for Appellants
Registration Number 40,905

APPENDIX A:
COPY OF CLAIMS INVOLVED IN THE APPEAL

1. A configuration for managing collection of samples and collecting, preserving,
5 integrating, processing and communication of information at locations remote
from a commercial power source and from a variety of sources, comprising:

a client-server system comprising:

at least one portable device having at least some of the
capabilities of a personal computer;

10 wherein said portable device may be used for said collecting,
preserving, integrating, processing and communication of at
least some of said information; and

at least one computer;

15 wherein said computer is available to communicate with said
portable device, and

wherein said computer may function as said server to post-
process data and to run pre-specified software applications;

at least one instrumentation device for at least collecting some
of said samples,

20 wherein said instrumentation device may communicate directly with

said portable device, said computer or another said instrumentation device;

at least one hardware interface,

wherein said hardware interface may be employed between said

5 instrumentation device and said portable device, between said

instrumentation device and said computer, between said portable device and

said computer, and between two or more items of said instrumentation, of

said portable device, and of said computer;

at least one software interface,

10 wherein said software interface may be employed between said

instrumentation device and said portable device, between said

instrumentation device and said computer, between two or more items of

said instrumentation, between said portable device and said computer, and

within said portable device, within said computer and within said

15 instrumentation device;

at least one Geographical Information System (GIS), embedded

within at least one of said portable device, said computer and

said instrumentation,

wherein said embedded GIS at least provides geo-spatially

20 referenced attribute data that expedites the resolution of spatial

relationships;

at least one communications device,

wherein said communications device facilitates communication
among at least said portable device, said computer and said
instrumentation device; and

at least one device to provide coded labels,

wherein said device to provide coded labels facilitates inventorying
and tracking of said samples.

2. The configuration of claim 1 in which said communications devices are
selected from the group consisting essentially of: laptop computers, cellular
telephones, satellite telephones, two-way radios, Personal Digital Assistants
(PDAs), cameras, wireless communication devices, land lines, encryption
devices, fiber optic wireless devices, infrared wireless devices, RF wireless
devices, and combinations thereof.

3. The configuration of claim 1 in which said instrumentation device is selected
from the group consisting essentially of: cameras, digital cameras with video
and audio capabilities, sensors, instruments, optical scanners, analog-to-digital
(A/D) converters, timers, clocks, inclinometers, altimeters, thermometers,

barometers, compasses, differential global positioning systems (GPS), laser range finders, radars, LADARs, sonar devices, spectrometers, digital signal processors (DSPs) and combinations thereof.

5 4. The configuration of claim 1 in which said variety of sources is selected from the group consisting essentially of: specialized data entry forms, aerial photographs, mapping programs, Geographic Information System (GIS) data, GIS data compliant with Federal Geographic Data Committee (FGDC) and Spatial Data Standard for Facilities, Infrastructure, and Environment (SDSFIE)
10 standards, GPS data, manually entered data, video data, audio data, analog data, digital data, and combinations thereof.

5. The configuration of claim 1 in which said portable device is selected from the group consisting essentially of: laptop computers, personal computers, PDAs,
15 purpose-built data collection devices, and combinations thereof.

6. The configuration of claim 1 in which said computer is selected from the group consisting essentially of: personal computers, laptop computers, desktop computers, mini-computers, mainframe computers, and combinations thereof.

7. The configuration of claim 1 in which said device to provide coded labels provides at least one bar code.

8. A method for managing collection of samples and the collecting, preserving,
5 integrating, processing and communication of information at locations remote from a commercial power source and from a variety of sources, comprising:

establishing requirements for said managing;

selecting a mix of hardware and software to meet said requirements;

procuring said hardware and software; and

10 integrating said hardware and software to implement said method.

9. The method of claim 8 further managing collection of samples by identifying said samples by a code, a date/time stamp associated with said code, and by a collection location associated with said code.

15 10. The method of claim 8 further comprising time tagging said information.

11. The method of claim 8 further comprising merging location data with said information.

12. The method of claim 11 in which said location data is provided at least in part from GPS data provided by least one GPS receiver as part of said hardware.

5 13. The method of claim 8 in which said integrating is performed at least in part using commercial-off-the-shelf (COTS) software.

14. The method of claim 8 in which said integrating further comprises using interactive databases as part of said software uploaded on at least one
10 computer as part of said hardware.

15. The method of claim 8 in which said software incorporates at least one Geographic Information System (GIS).

15 16. The method of claim 8 in which said integrating of at least two discrete pieces of said information is accomplished via the execution of a single step.

17. The method of claim 16 in which said single step is selected from the group consisting essentially of: clicking a mouse, pushing a button, activating a
20 switch, entering a command into a computer, touching a video screen, a

voice command, activating a tone, employing a source of electromagnetic energy, and combinations of the above.

18. The method of claim 16 in which said discrete pieces of information include
5 at least data on location of collection of said information and time of
collection of said information.

10

15

20

APPENDIX B:

EVIDENCE

None.

APPENDIX C:

RELATED APPEALS AND INTERFERENCES

None.